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million.

Corrections to this article were made on October 17, 2018. Specifically, table 2 was revised to remove an inadvertent row of data for the Northeast, April, 1.2

## Job openings reach a new high in 2017, hires and quits also increase

*According to data from the U.S. Bureau of Labor Statistics Job Openings and Labor Turnover Survey, job openings and hires continued an upward trend in 2017, with the job openings level at its highest since the series began in December 2000. Similarly, annual hires and quits levels increased over multiple years and throughout 2017.*

Within total separations, quits rose from 36.3 million in 2016 to 38.2 million in 2017. Layoffs and discharges increased slightly from 20.2 million in 2016 to 20.7 million in 2017. Other separations decreased from 4.4 million in 2016 to 4.2 million in 2017.

This article reviews 2017 JOLTS data at the total nonfarm level, by industry, and by region.<sup>1</sup> JOLTS produces monthly data on job openings, hires, quits, layoffs and discharges, and other separations from a sample of approximately 16,000 establishments. This sample comprises establishments from all 50 states, the District of Columbia, and all nonfarm industries as classified by the North American Industry Classification System (NAICS).<sup>2</sup> This sample allows publication of data by four census regions and by select two-digit NAICS codes. For definitions of JOLTS terms, see accompanying box.



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## Definitions of JOLTS terms\*

### Job openings

Job openings information is collected for the last business day of the reference month. A job opening requires that (1) a specific position exists and work is available for that position, (2) work could start within 30 days whether or not the employer found a suitable candidate, and (3) the employer is actively recruiting from outside the establishment to fill the position. Included are full-time, part-time, permanent, short-term, and seasonal openings. Active recruiting means that the establishment is taking steps to fill a position by advertising in newspapers or on the internet, posting help-wanted signs, accepting applications, or using other similar methods.

Jobs to be filled only by internal transfers, promotions, or recall from layoffs are excluded. Also excluded are jobs with start dates more than 30 days in the future, jobs for which employees have been hired but not yet reported for work, and jobs to be filled by employees of temporary help agencies, employee leasing companies, outside contractors, or consultants. The job openings rate is computed by dividing the number of job openings by the sum of employment and job openings and multiplying the quotient by 100.

### Hires

The hires level is the total number of additions to the payroll occurring at any time during the reference month, including both new and rehired employees; full-time, part-time, permanent, short-term, and seasonal employees; employees recalled to the location after a layoff lasting more than 7 days; on-call or intermittent employees who returned to work after having been formally separated; and transfers from other locations. The hires count does not include transfers or promotions within the reporting site, employees returning after being on strike, employees of temporary help agencies or employee leasing companies, outside contractors, or consultants. The hires rate is computed by dividing the number of hires by employment and multiplying that quotient by 100.

### Separations

The separations level is the total number of employment terminations occurring at any time during the reference month and is reported by type of separation: quits, layoffs and discharges, and other separations. (Some respondents are only able to report total separations.)

The quits count includes voluntary separations by employees (except for retirements, which are reported as other separations).

The layoffs and discharges count is made up of involuntary separations initiated by the employer and includes layoffs with no intent to rehire; formal layoffs lasting or expected to last more than 7 days; discharges resulting from mergers, downsizing, or closings; firings or other discharges for cause; terminations of permanent or short-term employees; and terminations of seasonal employees.

The other separations count includes retirements, transfers to other locations, deaths, and separations due to disability.

The separations count does not include transfers within the same location or employees on strike. The separations rate is computed by dividing the number of separations by employment and multiplying the resulting quotient by 100. The quits, layoffs and discharges, and other separations rates are computed similarly.

\*From *Handbook of Methods*, chapter 18, "Job Openings and Labor Turnover Survey" (U.S. Bureau of Labor Statistics, June 2015), <https://www.bls.gov/opub/hom/pdf/homch18.pdf>.

## Job openings

The job openings level is a procyclical measure of demand; job openings tend to increase during economic expansions and decrease during economic contractions.[3] More job openings indicate, generally, that employers need additional workers, a sign of a demand for labor and confidence in the economy. Job openings and employment are closely linked and tend to rise and fall together. In this context, also notable is that the number of employees on nonagricultural payrolls is considered a coincident economic indicator by the National Bureau of Economic Research.[4]

Job openings reached a monthly series high of 6.2 million in September 2017, indicating that the demand side of the labor force continued to improve. During 2017, both job openings and employment levels trended higher than in previous years. Monthly job openings rose from 5.0 million in December 2016 to 5.2 million in December 2017, a 3.5 percent increase.[5] (See table 1.) Monthly employment increased by 1.6 percent in December over the same period. (See figure 1.)

**Table 1. Change in job openings, by industry and region, not seasonally adjusted, December 2015 to December 2017**

Industry and region	Level by month and year (in thousands)			Change (Dec 2015–Dec 2016)		Change (Dec 2016–Dec 2017)	
	December 2015	December 2016	December 2017	Level	Percent	Level	Percent
Total nonfarm	4,972	5,044	5,222	72	1.4	178	3.5
Industry							
Total private	4,492	4,563	4,709	71	1.6	146	3.2
Mining and logging	15	23	20	8	53.3	–3	–13.0
Construction	127	139	149	12	9.4	10	7.2
Manufacturing	321	324	374	3	0.9	50	15.4
Durable goods	179	182	239	3	1.7	57	31.3
Nondurable goods	142	142	135	0	0.0	–7	–4.9

See footnotes at end of table.

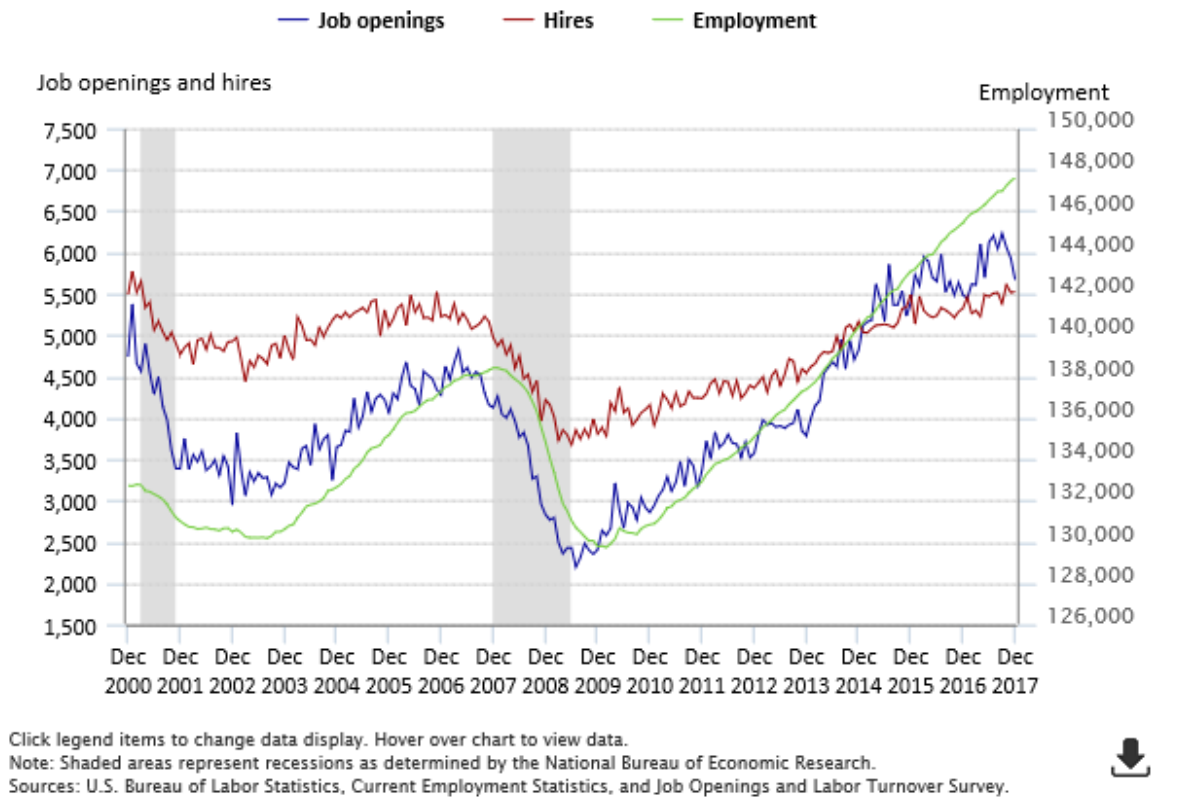
**Table 1. Change in job openings, by industry and region, not seasonally adjusted, December 2015 to December 2017**

Industry and region	Level by month and year (in thousands)			Change (Dec 2015–Dec 2016)		Change (Dec 2016–Dec 2017)	
	December 2015	December 2016	December 2017	Level	Percent	Level	Percent
Trade, transportation, and utilities	732	863	994	131	17.9	131	15.2
Wholesale trade	134	172	188	38	28.4	16	9.3
Retail trade	422	504	614	82	19.4	110	21.8
Transportation, warehousing, and utilities	176	187	192	11	6.3	5	2.7
Information	106	98	103	–8	–7.5	5	5.1
Financial activities	363	373	323	10	2.8	–50	–13.4
Finance and insurance	286	290	244	4	1.4	–46	–15.9
Real estate and rental and leasing	77	83	79	6	7.8	–4	–4.8
Professional and business services	1,028	839	767	–189	–18.4	–72	–8.6
Education and health services	1,033	1,116	1,064	83	8.0	–52	–4.7
Educational services	108	92	84	–16	–14.8	–8	–8.7
Healthcare and social assistance	926	1,024	980	98	10.6	–44	–4.3
Leisure and hospitality	573	547	719	–26	–4.5	172	31.4
Arts, entertainment, and recreation	48	68	66	20	41.7	–2	–2.9
Accommodation and food services	525	480	653	–45	–8.6	173	36.0
Other services	194	240	196	46	23.7	–44	–18.3
Government	481	481	513	0	0.0	32	6.7
Federal	84	112	79	28	33.3	–33	–29.5
State and local	396	369	434	–27	–6.8	65	17.6
Education	147	135	154	–12	–8.2	19	14.1
Excluding education	249	234	280	–15	–6.0	46	19.7
Region							
Northeast	838	888	902	50	6.0	14	1.6
South	1,917	1,850	1,836	–67	–3.5	–14	–0.8
Midwest	1,068	1,140	1,255	72	6.7	115	10.1
West	1,149	1,166	1,228	17	1.5	62	5.3

Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics.

**Figure 1. Job openings, hires, and employment, total nonfarm, seasonally adjusted, in thousands, December 2000–December 2017**



## Job openings by industry

Monthly job openings, not seasonally adjusted, were up over the year from December 2016 to December 2017 in nine industries. The largest over-the-year increases in job openings occurred in accommodation and food services (36.0 percent), durable goods manufacturing (31.3 percent), and retail trade (21.8 percent). Industries with the largest declines over the year included federal government (–29.5 percent), other services (–18.3 percent), and finance and insurance (–15.9 percent). (See table 1.)

During 2017, seasonally adjusted job openings in seven industries reached series highs. These industries include real estate and rental and leasing at 140,000 in January, healthcare and social assistance at 1.1 million in June, educational services at 140,000 in July, nondurable goods manufacturing at 201,000 in July, finance and insurance at 318,000 in September, retail trade at 53,000 in November, and accommodation and food services at 812,000 in December. (See table 2.)

**Table 2. Monthly series highs, by industry and region, seasonally adjusted, 2017**

Industry and region data element	Industry and region	Month	Level
Industry			
Job openings	Real estate and rental and leasing	January	140,000
Job openings	Healthcare and social assistance	June	1.1 million

See footnotes at end of table.

**Table 2. Monthly series highs, by industry and region, seasonally adjusted, 2017**

Industry and region data element	Industry and region	Month	Level
Job openings	Educational services	July	140,000
Job openings	Nondurable goods manufacturing	July	201,000
Job openings	Finance and Insurance	September	318,000
Job openings	Retail Trade	November	53,000
Job openings	Accommodation and food services	December	812,000
Hires	Mining and logging	May	39,000
Hires	Other services	October	249,000
Hires	Healthcare and social assistance	October	593,000
Hires	Professional and business services	December	1.2 million
Quits	Healthcare and social assistance	October	403,000
Quits	Professional and business services	December	747,000
Layoffs and discharges	Arts, entertainment, and recreation	July	139,000
Region			
Job openings	Northeast	July	1.1 million
Job openings	Midwest	September	1.6 million
Hires	South	October	2.3 million
Hires	Northeast	May	960,000
Quits	South	October	1.4 million
Quits	West	December	837,000

Source: U.S. Bureau of Labor Statistics.

## Job openings by region

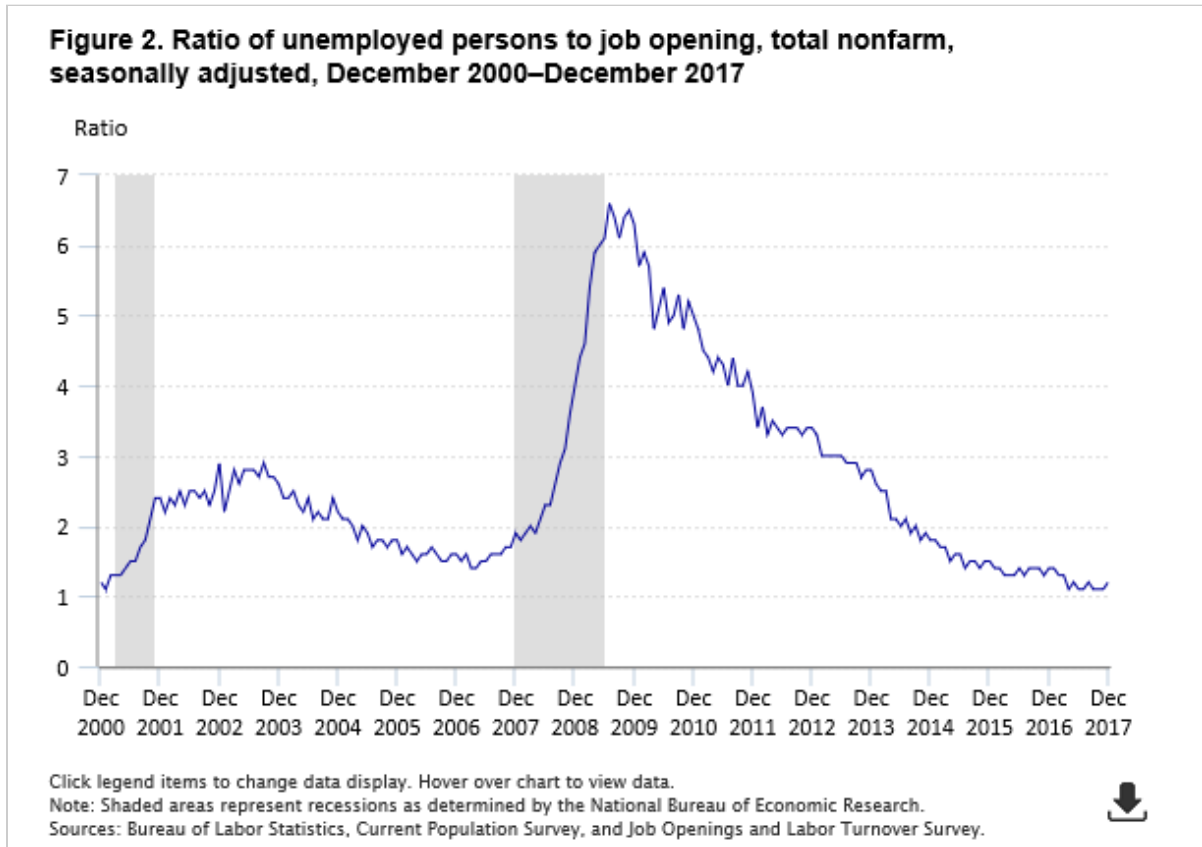
Three of the four census regions experienced upward trends in job openings from December 2016 to December 2017. The largest regional upward trend was in the Midwest, at 10.1 percent. Job openings in the West rose 5.3 percent, followed by those in the Northeast, which rose 1.6 percent. Job openings in the South were down –0.8 percent. (See table 1.)

Two regions reached series highs for seasonally adjusted job openings in 2017. In the Northeast, there were a record number of job openings at 1.1 million in July 2017. In the Midwest, job openings reached a high of 1.6 million job openings in September 2017. (See table 2.)

## Job openings and unemployment

One way to analyze job openings and unemployment is to consider the ratio of unemployed persons to job opening. To calculate this ratio, divide the number of unemployed from the Current Population Survey (CPS) by the number of job openings. Job openings and unemployment levels generally move in opposite directions. That is, when the economy is strong, job openings are high and unemployment is low, causing the ratio to decrease. The situation reverses as the economy weakens—unemployment increases and job openings decrease, leading to a higher ratio. Because of this countercyclical behavior, the ratio of the number of unemployed persons to job opening provides a metric that helps describe the state of the economy.<sup>[6]</sup>

When the most recent recession began in December 2007, the number of unemployed persons to job opening was 1.9.<sup>[7]</sup> The ratio peaked at 6.6 unemployed persons to job opening in July 2009, the month after the recession ended. In 2017, the ratio of unemployed persons to job opening ranged from a high of 1.4 to a low of 1.1. (See figure 2.)



## Hires

Like job openings, the data element hires is a procyclical measure. The hires level has increased each year since the end of the recession (2009). The total annual hires rose for 8 consecutive years, increasing 3.2 percent from 62.0 million in 2015 to 65.3 million in 2017. In comparison, annual hires increased a more moderate 2.0 percent in 2016. (See table 3.) The 2017 monthly level for hires climbed to 5.6 million in October 2017, the highest since March 2001.

**Table 3. Change in level and percentage of annual hires, by industry and region, not seasonally adjusted, 2015–17**

Industry and region	Level by year (in thousands)			Change (2015–16)		Change (2016–17)	
	2015	2016	2017	Level	Percent	Level	Percent
Total	62,027	63,240	65,259	1,213	2.0	2,019	3.2

See footnotes at end of table.



**Table 3. Change in level and percentage of annual hires, by industry and region, not seasonally adjusted, 2015–17**

Industry and region	Level by year (in thousands)			Change (2015–16)		Change (2016–17)	
	2015	2016	2017	Level	Percent	Level	Percent
<b>Industry</b>							
Total private	57,899	58,936	61,122	1,037	1.8	2,186	3.7
Mining and logging	300	290	377	–10	–3.3	87	30.0
Construction	3,931	4,041	4,438	110	2.8	397	9.8
Manufacturing	3,212	3,346	3,960	134	4.2	614	18.4
Durable goods	1,876	1,925	2,217	49	2.6	292	15.2
Nondurable goods	1,336	1,420	1,740	84	6.3	320	22.5
Trade, transportation, and utilities	13,005	12,744	12,587	–261	–2.0	–157	–1.2
Wholesale trade	1,662	1,660	1,677	–2	–0.1	17	1.0
Retail trade	9,015	8,677	8,424	–338	–3.7	–253	–2.9
Transportation, warehousing, and utilities	2,329	2,408	2,484	79	3.4	76	3.2
Information	954	961	943	7	0.7	–18	–1.9
Financial activities	2,366	2,350	2,481	–16	–0.7	131	5.6
Finance and insurance	1,588	1,549	1,622	–39	–2.5	73	4.7
Real estate and rental and leasing	776	798	856	22	2.8	58	7.3
Professional and business services	12,593	13,136	13,542	543	4.3	406	3.1
Education and health services	7,425	7,674	7,968	249	3.4	294	3.8
Educational services	1,058	1,111	1,106	53	5.0	–5	–0.5
Healthcare and social assistance	6,368	6,560	6,861	192	3.0	301	4.6
Leisure and hospitality	11,623	12,154	12,188	531	4.6	34	0.3
Arts, entertainment, and recreation	1,813	1,910	1,959	97	5.4	49	2.6
Accommodation and food services	9,810	10,245	10,228	435	4.4	–17	–0.2
Other services	2,489	2,243	2,643	–246	–9.9	400	17.8
Government	4,130	4,303	4,138	173	4.2	–165	–3.8
Federal	491	487	456	–4	–0.8	–31	–6.4
State and local	3,640	3,818	3,682	178	4.9	–136	–3.6
Education	1,809	1,867	1,798	58	3.2	–69	–3.7
Excluding education	1,834	1,947	1,883	113	6.2	–64	–3.3
<b>Region</b>							
Northeast	9,747	10,030	10,406	283	2.9	376	3.7
South	24,324	24,317	25,885	–7	0.0	1,568	6.4
Midwest	13,846	14,187	14,308	341	2.5	121	0.9
West	14,110	14,701	14,663	591	4.2	–38	–0.3

Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics.

## Hires by industry

Within all industries, annual hires rose in 12 out of 19 industries in 2017, fell in 5 industries, and remained relatively unchanged in the remaining 2 industries. The largest percent increases in annual hires levels in 2017 were in mining and logging (30.0 percent), nondurable goods manufacturing (22.5 percent), and other services (17.8 percent). The largest percentage declines in hires occurred in federal government (–6.4 percent), state and local



government education (–3.7 percent), and state and local government, excluding education (–3.3 percent). (See table 3.)

Five industries had annual series highs for hires in 2017. These industries include transportation warehousing and utilities; professional and business services; healthcare and social assistance; arts, entertainment, and recreation; and other services. (See table 3.)

In four industries during 2017, monthly seasonally adjusted hires reached series highs. These industries are mining and logging at 39,000 in May 2017, both other services at 249,000 and healthcare and social assistance at 593,000 in October 2017, and professional and business services at 1.2 million in December 2017. (See table 2.)

## Hires by region

Annual hires in the South region experienced the highest increase in annual hires in 2017, rising 6.4 percent (not seasonally adjusted). Annual hires also increased in the Northeast (3.7 percent) and Midwest (0.9 percent). The West region experienced the only drop in annual hires (–0.3 percent). (See table 3.)

In October 2017, the South experienced a high of 2.3 million hires based on a monthly seasonally adjusted rate. The Northeast experienced a series high for hires in May 2017 at 960,000. No other regions experienced monthly series highs for hires in 2017. (See table 2.)

## Hires and job openings

The monthly number of total nonfarm hires has exceeded job openings for most of the JOLTS series history because hires is a full-month (or flow) measure and job openings is a 1-day snapshot (or stock) measure. However, following steady growth after the end of the most recent recession, job openings started to increase rapidly in early 2014. Postrecession, hires also increased but at a slower pace than job openings. Job openings exceeding hires may suggest that employers have unmet demand for workers. Except for January, job openings exceeded hires for every month in 2017. In January, hires exceeded job openings by only 16,000. (See figure 1.)

## Total separations

The annual number of total separations, also referred to as turnover, increased 3.5 percent from 2016 to 2017, rising from 60.9 million to 63.0 million. (See table 4.) The level of total separations has risen annually for 7 consecutive years.

**Table 4. Change in in level and percentage of annual total separations, by industry and region, not seasonally adjusted, 2015–17**

Industry and region	Level by year (in thousands)			Change (2015–16)		Change (2016–17)	
	2015	2016	2017	Level	Percent	Level	Percent
Total	59,296	60,896	63,031	1,600	2.7	2,135	3.5
Industry							
Total private	55,348	56,789	58,949	1,441	2.6	2,160	3.8

See footnotes at end of table.

**Table 4. Change in in level and percentage of annual total separations, by industry and region, not seasonally adjusted, 2015–17**

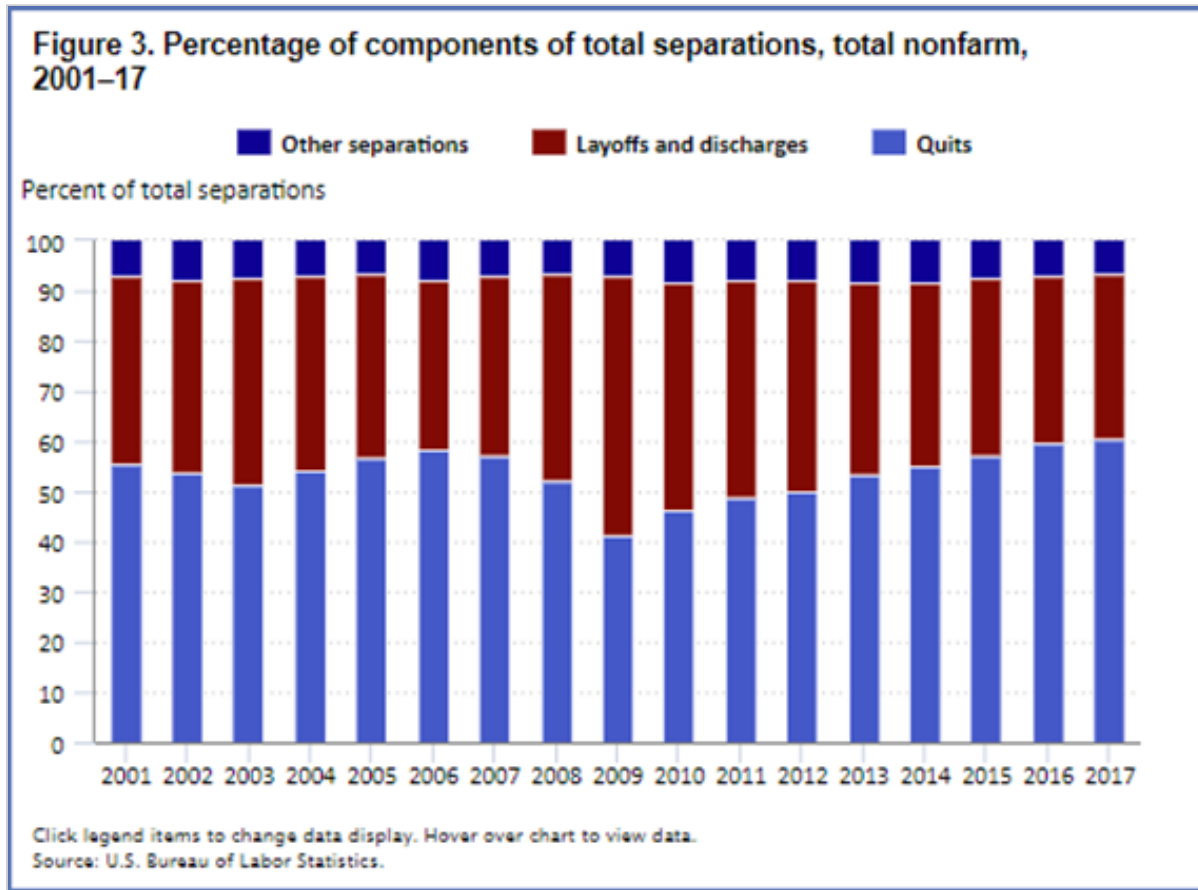
Industry and region	Level by year (in thousands)			Change (2015–16)		Change (2016–17)	
	2015	2016	2017	Level	Percent	Level	Percent
Mining and logging	452	391	324	–61	–13.5	–67	–17.1
Construction	3,593	3,900	4,180	307	8.5	280	7.2
Manufacturing	3,148	3,360	3,782	212	6.7	422	12.6
Durable goods	1,878	1,984	2,106	106	5.6	122	6.1
Nondurable goods	1,268	1,376	1,677	108	8.5	301	21.9
Trade, transportation, and utilities	12,599	12,322	12,372	–277	–2.2	50	0.4
Wholesale trade	1,646	1,631	1,612	–15	–0.9	–19	–1.2
Retail trade	8,833	8,477	8,413	–356	–4.0	–64	–0.8
Transportation, warehousing, and utilities	2,120	2,215	2,347	95	4.5	132	6.0
Information	925	914	979	–11	–1.2	65	7.1
Financial activities	2,218	2,165	2,328	–53	–2.4	163	7.5
Finance and insurance	1,479	1,422	1,532	–57	–3.9	110	7.7
Real estate and rental and leasing	739	745	798	6	0.8	53	7.1
Professional and business services	12,080	12,810	13,121	730	6.0	311	2.4
Education and health services	6,791	7,082	7,481	291	4.3	399	5.6
Educational services	981	1,018	1,007	37	3.8	–11	–1.1
Healthcare and social assistance	5,811	6,062	6,474	251	4.3	412	6.8
Leisure and hospitality	11,102	11,670	11,852	568	5.1	182	1.6
Arts, entertainment, and recreation	1,723	1,804	1,905	81	4.7	101	5.6
Accommodation and food services	9,381	9,863	9,946	482	5.1	83	0.8
Other services	2,435	2,176	2,529	–259	–10.6	353	16.2
Government	3,947	4,109	4,082	162	4.1	–27	–0.7
Federal	454	458	468	4	0.9	10	2.2
State and local	3,492	3,651	3,612	159	4.6	–39	–1.1
Education	1,723	1,782	1,735	59	3.4	–47	–2.6
Excluding education	1,769	1,868	1,879	99	5.6	11	0.6
Region							
Northeast	9,324	9,661	10,056	337	3.6	395	4.1
South	23,416	23,540	24,995	124	0.5	1,455	6.2
Midwest	12,922	13,507	13,755	585	4.5	248	1.8
West	13,633	14,186	14,226	553	4.1	40	0.3

"Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics."

Total separations comprise quits, layoffs and discharges, and other separations. Each of these data elements has its own unique trend and cyclical movements. Quits are procyclical, meaning they typically rise when the economy expands and fall when the economy contracts. Layoffs and discharges are countercyclical, which means that they typically rise during economic contractions and fall during economic expansions. The other separations data element remains relatively constant over time. Figure 3 shows this relationship by displaying the percentage of total separations attributed to each type of separation. The percentage of quits to total separations has been

increasing since 2009, while the percentage of layoffs and discharges within total separations has been decreasing since 2009.



Annual quits rose slightly over the year from 36.3 million in 2016 to 38.2 million in 2017. (See table 5.) The annual quits level has risen for 8 consecutive years. In December 2017, the monthly seasonally adjusted quits level was 3.3 million, the highest since January 2001.

**Table 5. Change in level and percentage of annual quits, by industry and region, not seasonally adjusted, 2015–17**

Industry and region	Level (in thousands)			Change (2015–16)		Change (2016–17)	
	2015	2016	2017	Level	Percent	Level	Percent
Total	33,732	36,339	38,180	2,607	7.7	1,841	5.1
Industry							
Total private	31,847	34,293	36,145	2,446	7.7	1,852	5.4
Mining and logging	177	162	176	–15	–8.5	14	8.6
Construction	1,366	1,495	1,821	129	9.4	326	21.8
Manufacturing	1,637	1,792	2,296	155	9.5	504	28.1
Durable goods	936	1,004	1,260	68	7.3	256	25.5
Nondurable goods	700	789	1,037	89	12.7	248	31.4

See footnotes at end of table.

**Table 5. Change in level and percentage of annual quits, by industry and region, not seasonally adjusted, 2015–17**

Industry and region	Level (in thousands)			Change (2015–16)		Change (2016–17)	
	2015	2016	2017	Level	Percent	Level	Percent
Trade, transportation, and utilities	7,534	7,737	7,890	203	2.7	153	2.0
Wholesale trade	934	1,009	1,031	75	8.0	22	2.2
Retail trade	5,485	5,575	5,617	90	1.6	42	0.8
Transportation, warehousing, and utilities	1,114	1,156	1,242	42	3.8	86	7.4
Information	503	487	534	–16	–3.2	47	9.7
Financial activities	1,211	1,209	1,370	–2	–0.2	161	13.3
Finance and insurance	817	804	916	–13	–1.6	112	13.9
Real estate and rental and leasing	393	406	458	13	3.3	52	12.8
Professional and business services	6,280	7,330	7,710	1,050	16.7	380	5.2
Education and health services	4,510	4,704	4,983	194	4.3	279	5.9
Educational services	529	562	557	33	6.2	–5	–0.9
Healthcare and social assistance	3,981	4,142	4,426	161	4.0	284	6.9
Leisure and hospitality	7,276	8,084	7,933	808	11.1	–151	–1.9
Arts, entertainment, and recreation	658	853	781	195	29.6	–72	–8.4
Accommodation and foodservices	6,615	7,232	7,155	617	9.3	–77	–1.1
Other services	1,351	1,295	1,429	–56	–4.1	134	10.3
Government	1,883	2,047	2,034	164	8.7	–13	–0.6
Federal	150	162	189	12	8.0	27	16.7
State and local	1,730	1,884	1,845	154	8.9	–39	–2.1
Education	867	915	908	48	5.5	–7	–0.8
Excluding education	863	967	939	104	12.1	–28	–2.9
Region							
Northeast	4,752	5,005	5,310	253	5.3	305	6.1
South	13,994	14,630	15,587	636	4.5	957	6.5
Midwest	7,423	8,080	8,282	657	8.9	202	2.5
West	7,564	8,626	8,997	1,062	14.0	371	4.3

Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics.

Annual layoffs and discharges increased slightly from 20.2 million in 2016 to 20.7 million in 2017. (See table 6.)

Annual other separations declined from 4.4 million in 2016 to 4.2 million in 2017. (See table 7.)

**Table 6. Change in level and percentage of annual layoffs and discharges, by industry and region, not seasonally adjusted, 2015–17**

Industry and region	Level (in thousands)			Change (2015–16)		Change (2016–17)	
	2015	2016	2017	Level	Percent	Level	Percent
Total	20,963	20,152	20,676	–811	–3.9	524	2.6
Industry							
Total private	19,665	18,822	19,351	–843	–4.3	529	2.8

See footnotes at end of table.

**Table 6. Change in level and percentage of annual layoffs and discharges, by industry and region, not seasonally adjusted, 2015–17**

Industry and region	Level (in thousands)			Change (2015–16)		Change (2016–17)	
	2015	2016	2017	Level	Percent	Level	Percent
Mining and logging	241	175	119	–66	–27.4	–56	–32.0
Construction	2,077	2,221	2,180	–843	–4.3	529	2.8
Manufacturing	1,234	1,281	1,223	–66	–27.4	–56	–32.0
Durable goods	768	799	694	144	6.9	–41	–1.8
Nondurable goods	463	483	529	47	3.8	–58	–4.5
Trade, transportation, and utilities	3,836	3,468	3,565	31	4.0	–105	–13.1
Wholesale trade	583	488	462	20	4.3	46	9.5
Retail trade	2,438	2,128	2,160	–368	–9.6	97	2.8
Transportation, warehousing, and utilities	813	855	942	–95	–16.3	–26	–5.3
Information	305	295	339	–310	–12.7	32	1.5
Financial activities	700	663	655	42	5.2	87	10.2
Finance and insurance	416	378	363	–10	–3.3	44	14.9
Real estate and rental and leasing	284	284	291	–37	–5.3	–8	–1.2
Professional and business services	5,069	4,838	4,770	–38	–9.1	–15	–4.0
Education and health services	1,733	1,918	1,940	0	0.0	7	2.5
Educational services	380	390	385	–231	–4.6	–68	–1.4
Healthcare and social assistance	1,354	1,527	1,556	185	10.7	22	1.1
Leisure and hospitality	3,511	3,179	3,572	10	2.6	–5	–1.3
Arts, entertainment, and recreation	1,019	918	1,085	173	12.8	29	1.9
Accommodation and foodservices	2,492	2,262	2,488	–332	–9.5	393	12.4
Other services	960	790	987	–101	–9.9	167	18.2
Government	1,297	1,330	1,324	–230	–9.2	226	10.0
Federal	163	157	157	–170	–17.7	197	24.9
State and local	1,134	1,173	1,169	33	2.5	–6	–0.5
Education	559	581	536	–6	–3.7	0	0.0
Excluding education	577	590	633	39	3.4	–4	–0.3
Region							
Northeast	3,662	3,902	3,976	22	3.9	–45	–7.7
South	7,616	7,171	7,876	13	2.3	43	7.3
Midwest	4,619	4,516	4,604	240	6.6	74	1.9
West	5,063	4,564	4,222	–445	–5.8	705	9.8

Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics.

**Table 7. Change in level and percentage of annual other separations, by industry and region, not seasonally adjusted, 2015–17**

Industry and region	Level (in thousands)			Change (2015–16)		Change (2016–17)	
	2015	2016	2017	Level	Percent	Level	Percent
Total	4,604	4,405	4,175	–199	–4.3	–230	–5.2
Industry							

See footnotes at end of table.

**Table 7. Change in level and percentage of annual other separations, by industry and region, not seasonally adjusted, 2015–17**

Industry and region	Level (in thousands)			Change (2015–16)		Change (2016–17)	
	2015	2016	2017	Level	Percent	Level	Percent
Total private	3,836	3,673	3,453	–163	–4.2	–220	–6.0
Mining and logging	34	56	30	22	64.7	–26	–46.4
Construction	150	184	175	34	22.7	–9	–4.9
Manufacturing	278	287	264	9	3.2	–23	–8.0
Durable goods	174	180	153	6	3.4	–27	–15.0
Nondurable goods	104	108	112	4	3.8	4	3.7
Trade, transportation, and utilities	1,229	1,117	919	–112	–9.1	–198	–17.7
Wholesale trade	129	137	118	8	6.2	–19	–13.9
Retail trade	910	773	633	–137	–15.1	–140	–18.1
Transportation, warehousing, and utilities	188	206	166	18	9.6	–40	–19.4
Information	119	133	107	14	11.8	–26	–19.5
Financial activities	309	292	302	–17	–5.5	10	3.4
Finance and insurance	245	239	251	–6	–2.4	12	5.0
Real estate and rental and leasing	62	53	48	–9	–14.5	–5	–9.4
Professional and business services	729	643	639	–86	–11.8	–4	–0.6
Education and health services	548	459	557	–89	–16.2	98	21.4
Educational services	70	64	63	–6	–8.6	–1	–1.6
Healthcare and social assistance	477	396	494	–81	–17.0	98	24.7
Leisure and hospitality	317	407	349	90	28.4	–58	–14.3
Arts, entertainment, and recreation	45	36	43	–9	–20.0	7	19.4
Accommodation and food services	272	373	305	101	37.1	–68	–18.2
Other services	124	89	114	–35	–28.2	25	28.1
Government	767	734	722	–33	–4.3	–12	–1.6
Federal	143	138	123	–5	–3.5	–15	–10.9
State and local	626	594	599	–32	–5.1	5	0.8
Education	296	285	292	–11	–3.7	7	2.5
Excluding education	331	308	305	–23	–6.9	–3	–1.0
Region							
Northeast	911	755	768	–156	–17.1	13	1.7
South	1,808	1,743	1,535	–65	–3.6	–208	–11.9
Midwest	880	909	867	29	3.3	–42	–4.6
West	1,008	996	1,007	–12	–1.2	11	1.1

Note: Details may not sum to totals because of rounding.

Source: U.S. Bureau of Labor Statistics.

## Components of separations by industry

### Quits

In 2017, the number of annual quits grew in 14 out of 19 industries, while 5 industries had fewer quits. The largest increases in annual quits levels in 2017 were in nondurable goods manufacturing (31.4 percent), durable goods manufacturing (25.5 percent), and construction (21.8 percent). The largest declines in annual quits were in arts, entertainment, and recreation (–8.4 percent); state and local government, excluding education (–2.9 percent); and

accommodation and food services (–1.1 percent). Three industries reached a series high for the annual level of quits: transportation, warehousing, and utilities at 1.2 million; professional and business services at 7.7 million; and healthcare and social assistance at 4.4 million. (See table 5.)

Two industries reached monthly seasonally adjusted series highs for quits in 2017. These industries include healthcare and social assistance at 403,000 in October 2017 and professional and business services at 747,000 in December 2017. (See table 2.)

## Layoffs and discharges

Annual layoffs and discharges dropped from 2016 to 2017 in 8 out of 19 industries, while 10 industries had higher layoffs and discharges and 1 remained unchanged. The largest declines in annual layoffs and discharges levels were in mining and logging (–32.0 percent); transportation, warehousing, and utilities (–5.3 percent); and nondurable goods manufacturing (–4.0 percent). The largest increases in annual layoffs and discharges were in federal government (24.9 percent), other services (18.2 percent), and finance and insurance (14.9 percent).

One industry reached a series low annual layoffs and discharges level—wholesale trade (462,000), and one industry reached a series high annual layoffs and discharges level—arts, entertainment, and recreation (1.1 million). (See table 6.) The only industry to reach a series high for the seasonally adjusted monthly layoffs and discharges level was arts, entertainment, and recreation at 139,000 in July 2017. (See table 2.)

## Other separations

From 2016 to 2017, annual other separations increased in 6 out of 19 industries, whereas 13 industries had fewer annual other separations. The largest percent increases in annual other separations were in other services (28.1 percent), healthcare and social assistance (24.7 percent), and arts, entertainment, and recreation (19.4 percent). The largest percentage declines in annual other separations were in mining and logging (–46.4 percent), information (–19.5 percent), and transportation, warehousing, and utilities (–19.4 percent). (See table 7.) Other separations for durable goods manufacturing dropped to an annual series low of 153,000 and real estate and rental and leasing dropped to an annual series low of 48,000. (See table 7.)

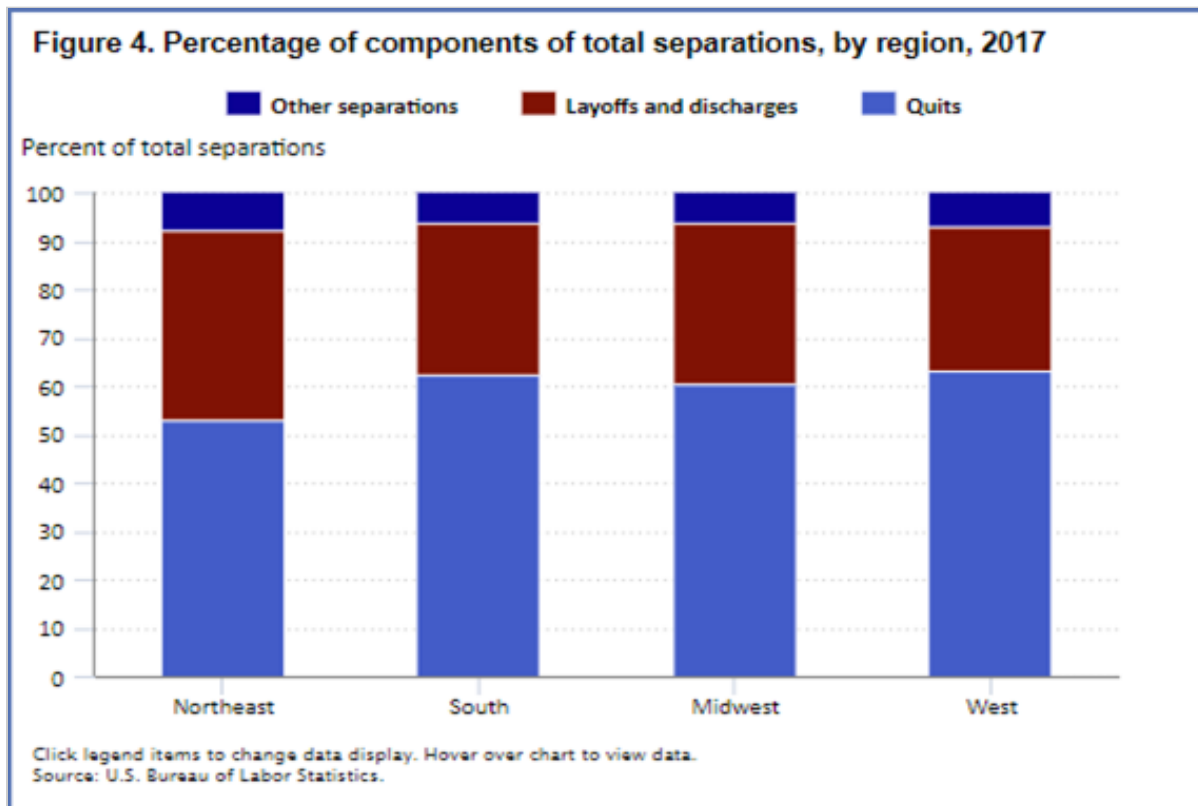
## Components of separations by region

In 2017, the Northeast region had an annual level of 10.1 million total separations. Within total separations, the Northeast experienced 5.3 million quits, 4.0 million layoffs and discharges, and 768,000 other separations. In the South region, the annual level of total separations for 2017 was 25.0 million. Within total separations in the South region, the quits level was 15.6 million, the layoffs and discharges level was 7.9 million, and other separations level was 1.5 million. In the Midwest region, in 2017, the annual total separations level was 13.8 million. Within total separations in the Midwest, there were 8.3 million quits, 4.6 million layoffs and discharges, and 867,000 other separations. In 2017, the West region annual total separations level was 14.2 million. Within total separations in the West region, the quits level was 9.0 million, the layoffs and discharges level was 4.2 million, and the other separations level was 1.0 million. (See tables 4–7.)

Only two regions experienced monthly series highs, both in quits. The South monthly quits reached a series high of 1.4 million in October 2017. For the West, monthly quits reached a series high of 837,000 in December 2017.

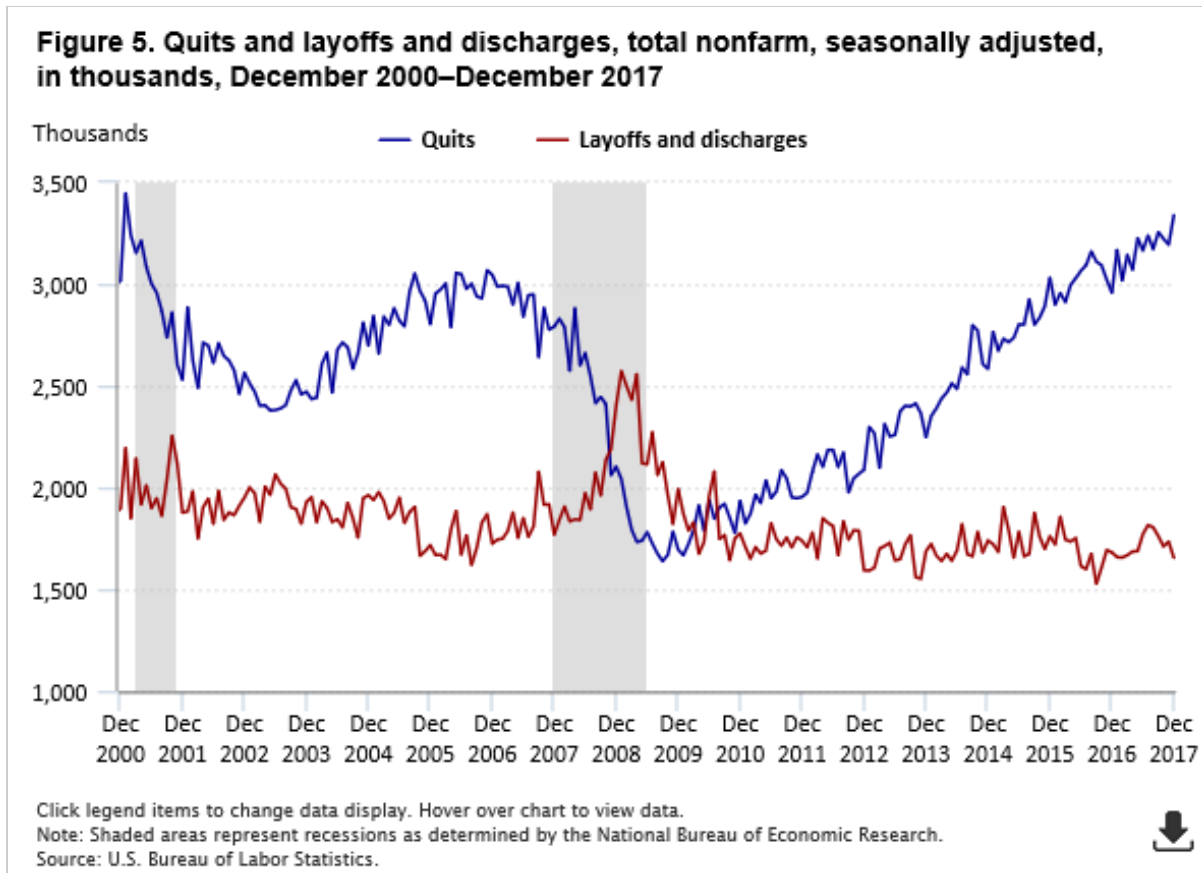


This component analysis illustrates the different characteristics of the JOLTS data at the regional level. The Northeast region experienced the smallest percentage, at 52.8 percent in 2017, of quits within total separations. The West region experienced the highest percentage, at 63.2 percent, of quits to total separations. In 2017, the Northeast region had the largest percentage, at 39.5 percent, of layoffs and discharges within total separations. The West region had the lowest percentage of layoffs and discharges, at 29.7 percent. The Northeast had the highest percentage, at 7.6 percent, of other separations within total separations, whereas the South region had the lowest percentage, at 6.1 percent. (See figure 4.)



## Quits compared with layoffs and discharges

From 2009 to 2010, near the end of the most recent recession, layoffs and discharges exceeded quits in most months. However, excluding this timeframe, quits exceeded layoffs and discharges. In 2017, quits continued to exceed layoffs and discharges. As figure 5 illustrates, these two data elements have an inverse relationship.



## Summary

JOLTS annual data show a continuing upward trend in the labor market throughout 2017. The Job openings level reached its highest point since the series began, indicating an increasing demand for labor. Annual hires and quits levels trended up multiple years in a row and throughout 2017. JOLTS data describe rising levels of hires and quits throughout the economy in 2017.

### SUGGESTED CITATION

Katherine Bauer and Paul R. Calhoun Jr., "Job openings reach a new high in 2017, hires and quits also increase," *Monthly Labor Review*, U.S. Bureau of Labor Statistics, October 2018, <https://doi.org/10.21916/mlr.2018.23>.

### NOTES

<sup>1</sup> The most detailed geographical breakout that the JOLTS sample can provide by region is the Northeast, the South, the Midwest, and the West.

<sup>2</sup> When collecting, analyzing, and publishing statistical data related to the U.S. business economy, federal statistical agencies use the North American Industry Classification System (NAICS) as the standard to classify business establishments. For more information, see "North American Industry Classification System: Introduction to NAICS" (U.S. Census Bureau), <https://www.census.gov/eos/www/naics/>. Out-of-scope NAICS industries are agricultural establishments (NAICS 11), except logging (NAICS 1133), and private households (NAICS 814110). See *Handbook of Methods*, chapter 18, "Job Openings and Labor Turnover Survey" (U.S. Bureau of Labor Statistics, June 2015), <https://www.bls.gov/opub/hom/pdf/homch18.pdf>.

[3](#) Procyclical is a condition of positive correlation between the value of a good, a service, or an economic indicator and the overall state of the economy. In other words, the value of the good, service, or indicator tends to move in the same direction as the economy, growing when the economy grows and declining when the economy declines.” For more information, see “Procyclic,” Investopedia, LLC, at <http://www.investopedia.com/terms/p/procyclical.asp>.

[4](#) For more information concerning principal federal economic indicators, see “U.S. business cycle expansions and contractions” (Cambridge, MA: National Bureau of Economic Research, September 20, 2010), <http://www.nber.org/cycles/>.

[5](#) The JOLTS program considers job openings a stock measure and does not produce job openings annual totals.

[6](#) Countercyclical is a condition of negative correlation between when the value of the good, service, or indicator “moving in the opposite direction of the overall economic cycle: rising when the economy is weakening, and falling when the economy is strengthening.” For more information, see “Countercyclical,” *InvestorWords* (WebFinance, Inc.), at <http://www.investorwords.com/1166/countercyclical.html>.

[7](#) “U.S. business cycle expansions and contractions” (Cambridge, MA: National Bureau of Economic Research, September 20, 2010), <http://www.nber.org/cycles/>.

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